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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/980,431	03/27/2002	Claude Yonnet	MEW 087-100/011018	3416

24118 7590 04/23/2003

HEAD, JOHNSON & KACHIGIAN
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TULSA, OK 74119

EXAMINER

KRISHNAMURTHY, RAMESH

ART UNIT	PAPER NUMBER
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3753

DATE MAILED: 04/23/2003

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/980,431

Applicant(s)

YONNET, CLAUDE

Examiner

Ramesh Krishnamurthy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 March 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7. 6) ☐ Other: _____

This office action is responsive to communications filed 23 April 2002.

1. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

In the instant application Claim no. 4 is missing. Claims 5 – 11 have been renumbered 4 – 10. **Claims 1 – 10 are pending.**

2. The drawings are objected to because of (a) the defects listed on the attached PTO-948 form and (b) Figures 1 - 4 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 – 10 are rejected under 35 U.S.C. 102(b) as being anticipated by FR 1,582,851.

The document FR 1,582,851 discloses (Figs. 2 and 5) a pilot valve (10) said valve comprising: biasing means (2) to control a gate (attached to 18, 19) for controlling

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fluid flow through a control chamber (12); a second chamber (11) sealed by a second chamber diaphragm (9) into which control pressure is applicable (via ports (3)) for also controlling the operation of the gate, whereby, in use, an increase in control pressure acts to reduce fluid flow through the gate (*since an increase in the control pressure (p) moves the diaphragm (9) and therewith the gate to decrease the flow through the gate and also as evident from equations (3) and (4) that show the ratio of a change in p i.e. dp to that of a corresponding change in P (outlet or downstream pressure) i.e. dP to be negative*); and

Wherein the side of the diaphragm (9) against which the control pressure is not applied (i.e. the side facing the chamber (12)) is in fluid communication with the control chamber (12).

Regarding claim 2, it is noted that the biasing means (2) is biased to open the gate. As seen clearly from Figs. 2 and 5, spring (2) exerts a restoring force upward that acts on the diaphragm (9) to move the gate therewith (since diaphragm (9) is rigidly attached to the gate) to an open position.

Regarding claims 3 and 4, it is noted that the biasing means (2) is rigidly connected (see Figs. 2 and 5) to the diaphragm (9) and therewith to the gate.

Regarding claims 5 and 6, it is noted that biasing means (2) is indeed a helical spring.

Regarding claims 7 and 8, it is noted that a control chamber diaphragm (15, 16, 17) is provided such that the biasing means (2) is located on the opposite side of the control chamber diaphragm (15, 16, 17) to said control chamber (12).

Regarding claim 10, it is noted that claim 10 is a combination of claims 1 – 8 whose individual rejections have been set forth above.

It is further noted that the recitation of "water" in claim 1 is reflective of intended use and is not given any patentable weight in this office action.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over FR 1,582,851.

The document FR 1,582,851 discloses the claimed invention with the exception of explicitly disclosing the ratio of the area of the control chamber diaphragm to the second chamber diaphragm to be 2:1 or less.

However, it is noted that the ratio of the area of said control chamber diaphragm (S3') to said second chamber diaphragm (S1') is variable since as recited in claim 4 of FR 1,582,851, S1 (or equivalently S1') is modifiable to correspond to a desired value of the coefficient multiplier k and therefore the set of all such desired values is taken here to include a ratio of S3' to S1' that would be 2:1 or less.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have chosen the ratio of the area of the control chamber diaphragm to the second chamber diaphragm to be 2:1 or less since such a value merely results in a particular value for the coefficient multiplier k which in turn denotes

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the sensitivity of the downstream pressure (P) to the changes in the control pressure (p) as represented in equations (1) – (5) on pages 3 and 4 of FR 1,582,851. Thus the sensitivity or multiplier effect desired guides the choice of k and therefore the corresponding value of the ratio of the area of the control chamber diaphragm to the second chamber diaphragm.

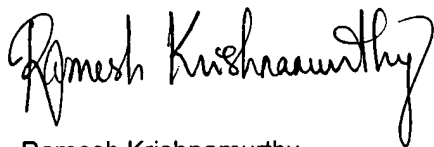
7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ritter et al., Reese, Doe, Callenberg, Yonnet, Scott et al. and Blann et al. disclose various arrangements of a pilot operated pressure reducing valve. Matsumoto discloses fluid pipeline network and flow control therein. Borcuch et al. discloses fluid delivery pressure control system. Johnson discloses a remote controlled drinker system. Document EP 0081229 discloses pressure regulator with the embodiment in Fig. 8 being particularly relevant.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramesh Krishnamurthy whose telephone number is (703) 305 - 5295. The examiner can normally be reached on Monday - Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael P. Buiz, can be reached on (703) 308 - 0871. The fax phone number for the organization where this application or proceeding is assigned is (703) 308 - 7765.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 - 0861.

A handwritten signature in black ink, reading "Ramesh Krishnamurthy". The signature is written in a cursive style with a large, stylized 'R' and a long, sweeping tail.

Ramesh Krishnamurthy
Examiner
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April 14, 2003